

DELTA SHIPYARD
LAD058475419

DATE	TO	FROM	SUBJECT
09/12/84	LDEQ	EPA	Site Inspection Report
05/26/94	Lynn Dean	EPA	Site Access Request

9418114





~~CONFIDENTIAL~~

PATRICIA L. NORTON
SECRETARY

OFFICE OF SOLID AND HAZARDOUS WASTE

JOHN KOURY
ASSISTANT SECRETARY

February 5, 1986

Mr. Conrad A. Dussel, P.E.
Wink Engineering
7520 Hayne Boulevard
New Orleans, Louisiana 70126-1899

Dear Mr. Dussel:

Re: Delta Shipyard's Waste Sites at Houma and Duson, Louisiana

The Hazardous Waste Division acknowledges receipt of your letter dated July 7, 1985, requesting declassification of the two sites.

A review of the data was made and inspections of both sites were performed by department personnel.

The inspections revealed the following:

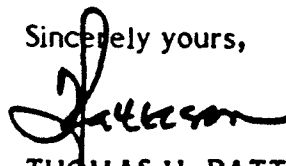
1. Duson Site--In addition to items noted in your letter, our inspector identified:
 - a. A number of drums containing waste oil located in and near the green maintenance shed on the south portion of the property.
 - b. A concrete sump and what appeared to be a pipe cleaning area in an unroofed metal building in the east central portion of the site. The soils immediately adjacent to these areas were devoid of vegetation, indicating some type of contamination.
 - c. Drums in and around the pipe and vessel graveyard in the northwest portion of the site. Some were empty and some contained liquids.
2. Houma--In addition to the impoundments described in your letter, our inspector identified:
 - a. Numerous drums were observed throughout the site.

In light of the data submitted and our inspector's observations, the Hazardous Waste Division concurs with your position that the impoundments described in your July 5th letter are non-hazardous and should be closed in accordance with Solid Waste Regulations.

With regard to the additional items noted by our inspector, the Hazardous Waste Division requests documentation on the contents of the concrete sump, the pipe cleaning area and the drums at the Duson site. Also, information is needed on the contents of the drums at the Houma site.

If there are any questions concerning this matter, please feel free to contact this office.

Sincerely yours,



THOMAS H. PATTERSON
Enforcement Program Manager

THP:RG:fl

cc: Mr. Paul Miller, Solid Waste Division
Mr. Richard Goudeau, Hazardous Waste Division

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF SOLID & HAZARDOUS WASTE
HAZARDOUS WASTE DIVISION
GENERAL INSPECTION

PF
RF
Richard

DATE April 16, 1986

COMPANY Delta Shipyards (Now owned by Elevating Boats, Inc.) EPA # LAD058475419

MAILING ADDRESS Rt. 1 Box 217, Braithwaite, La. 70040

MANAGER Lynn Dean CONTACT _____ PHONE # _____

OPERATION LOCATION Houma--Industrial Blvd. PARISH Terrebonne

TYPE OF OPERATION Inactive shipyard and gas free plant.

REASON FOR VISIT Sampling of impoundments and tanks. Complaint received by office
stated impoundments held hazardous waste.

INVESTIGATORS Richard G. Goudeau PERSONS INTERVIEWED Wes Bozone
Vic Montelaro Elevating Boats

NARRATIVE:

Upon arrival at the site we were met by Mr. Bozone. He stated the site had been purchased by Mr. Lynn Dean who owned Elevating Boats, Inc. This information was not available to the inspectors prior to the effort. Subsequent to this, a purchase date of April 8, 1986 has been confirmed.

Samples were obtained from tanks and impoundments located on site. The tanks were utilized in the past in conjunction with a barge gasfreeing operation. Two closed pits also involved in this operation were sampled. Finally, samples were taken from a large open impoundment not associated with the gas free operation. (See Sketch).

Sampling went as follows:

1. Due to unforeseen presence of waste in tanks and the apparent similarity a composite was taken.

Tanks 1, 3 and 5 only were sampled due to accessibility #20186041601 analysis requested: VOA, metals and PCB's.

2. North closed pit--20186041602--depth composite at two (2) locations. Analysis request: VOA, PCB, Metals

3. South Closed Pit--20186041603--same as 2.
(Continued on Back)

REPORT BY: Richard Goudeau REVIEWED BY: V. Montelaro
RICHARD GOUDEAU

DATE: May 7, 1986

Thomas H. Patterson
THOMAS H. PATTERSON
Enforcement Program Manager

Toxicon Laboratories Analytical Work Request

3213 Monterrey Blvd. Baton Rouge, Louisiana 70814 (504) 925-5012

Company: DEQ Hazardous Waste Facility/Site: _____
 Address: _____ Attn: Mr. Glenn M. Iv
 City/State/Zip Code: Baton Rouge LA Phone: _____
 area code number

Parameter/Category	Method	01	02	03	04	05	06	07	08	09	10	Total
CONVENTIONAL PARAMETERS												
Acidity as Calcium Carbonate	EPA 305.1											
Alkalinity as Calcium Carbonate	EPA 310.1											
Ammonia	EPA 350.3											
Biochemical Oxygen Demand (BOD 5)	EPA 405.1											
Carbonaceous Biological Oxygen Demand (CBOD 5)	EPA 405.1											
Chemical Oxygen Demand (COD)	EPA 410.5											
Chloride	EPA 325.3											
Chlorine, Total Residual	EPA 330.3											
Coliform, Total	Std. Meth. 909A											
Color	EPA 110.2											
Cyanide	EPA 335.2											
Fluoride	EPA 340.2											
Hardness	EPA 130.2											
Nitrate	EPA 353.3											
Nitrite	EPA 353.3											
Oil and Grease	EPA 413.1											
Phenols, Total	EPA 150.1											
Phosphate, Hydrolyzable	EPA 420.1											
Phosphate, Organic	EPA 365.2											
Phosphate, Ortho	EPA 365.2											
Phosphorous, Total	EPA 365.2											
Residue, Total (TS)	EPA 160.3											
Residue, Filterable (TDS)	EPA 160.1											
Residue, Nonfilterable (TSS)	EPA 160.2											
Residue, Settleable	EPA 160.5											
Residue, Volatile (VS)	EPA 160.4											
Residue, Volatile Filterable (VSS)												
Sulfate	EPA 370.1											
Total Conductance	EPA 120.1											
Total Solids	EPA 375.4											
Total Suspended Solids	EPA 376.2											
Total Dissolved Solids	EPA 377.1											
Organic Halogens (MOAS)	EPA 423.1											
Organic Carbon (TOC)	EPA 415.1											
Organic Halogens (TOX)	EPA 450.1											
Oil Content	EPA 180.1											

PA methods employed unless otherwise specified.

page four

CLIENT SAMPLE IDENTIFICATION P. O. No./Contract No. <u>25500-85-02</u> <input type="checkbox"/> Routine Turnaround <input type="checkbox"/> Emergency Turnaround		01 02 03 04 05 06 07 08 09 10 16 17 18 19 20 21 22 23 24 25
FOR OFFICE USE ONLY: LABORATORY SAMPLE IDENTIFICATION Data Verification Date <u>10/10/86</u> mo. day year		01 02 03 04 05 06 07 08 09 10 26 27 28 29 30 31 32 33 34 35
Sample Point Type Code (select below)	T G G G	
Sample Matrix Code (select below)	H B B B	
Start Date (month/day/year)	09/18/86	
Start Time (2400 hour clock)	1000	
Elapsed Time in Hours		
Total Number of Sample Containers per Sample Point	1 1 1 1	Total 4
Sample Point Type Code W well C leachate collection system F outfall R river/stream I surface impoundment G generation point L lake T treated effluent B boring P pretreatment R runoff	Sample Matrix Code W water S soil/sediment H hazardous waste T tissue B boring O oil X other (specify) _____	
CHAIN OF CUSTODY authorized (print) _____ signature <u>Richard L. Brundage</u> date _____ witness _____ Released by: <u>Richard L. Brundage</u> date: <u>04/21/86</u> time: <u>1449</u> I certify that I received from the courier the sealed chest as noted above containing the samples listed above with the seal intact and in apparent good condition. Received by: <u>Lo L. Westerman</u> date: <u>04/21/86</u> time: <u>1449</u>		

Parameter/Category	Method ¹	01	02	03	04	05	06	07	08	09	10	Total
HAZARDOUS SUBSTANCE LIST (HSL) COMPOUNDS												
Unknowns: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no ²	EPA SOW 785 ³											4
Purgeable Volatile HSL	EPA SOW 785	✓	✓	✓	✓							
Semi-Volatile Base Neutrals / Acids	EPA SOW 785											
Pesticides and PCBs	EPA SOW 785		✓	✓	✓							3
EPA CLP Metals (24)	EPA SOW 784											
PRIORITY POLLUTANTS LESS ASBESTOS												
Purgeable Volatiles	EPA 624											
Semi-Volatile Base Neutrals	EPA 625											
Semi-Volatile Acids	EPA 625											
Pesticides and PCBs	EPA 625											
Pesticides and PCBs	EPA 608											
Metals	EPA 200 series											
Cyanide	EPA 335.2											
Asbestos												
GROUNDWATER MONITORING												
Part I: Drinking Water Supply Indicators												
Part II: Groundwater Quality Parameters												
Part III: Groundwater Contamination Parameters / Quadruplicate: <input type="checkbox"/> yes <input type="checkbox"/> no												
HAZARDOUS WASTE CHARACTERIZATION												
EP Toxicity Leachate Extraction Procedure	EPA 1310	✓	✓	✓								3
Metals (8) from Leachate ①	EPA 7000 series	✓	✓	✓								3
Pesticides (4) / Herbicides (2) from Leachate	EPA 8080, 8150											
Corrosivity (pH aqueous solutions)	EPA 9040											
Ignitability (Flashpoint)	ASTM D 93											
Reactivity (Cyanide, Sulfide)	EPA 9010, 9030											
Primary Drinking Water Standards												
Secondary Drinking Water Standards												
Polychlorinated Biphenyls in Oil (PCBs)	EPA 600/4-81-045	✓										1
Polychlorinated Biphenyls (PCBs)	EPA 608											
Herbicides	Std. Meth. 509B											
① AA Flame & Furnace. Method of Standard Additions												

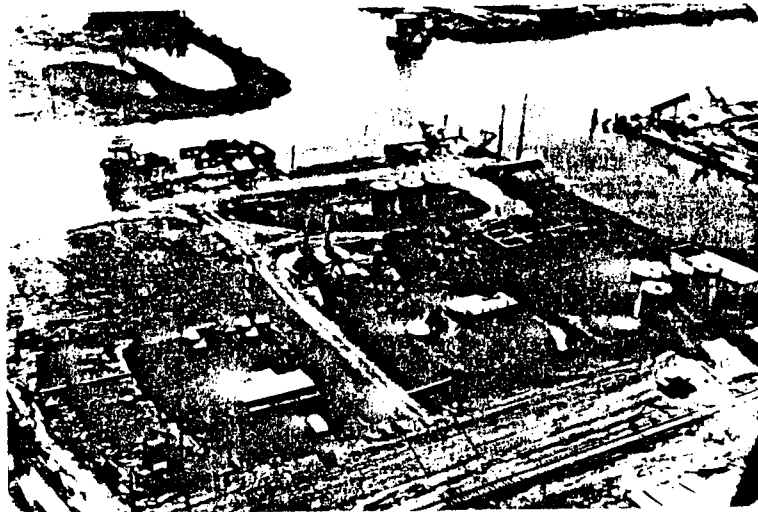
¹ EPA methods employed unless otherwise specified.

² Tentative non-HSL compound identifications are for up to 10 Purgeable Volatile and up to 20 Semivolatile Base Neutral/Acid extractable compounds made by library searching the current NBS/EPA/NBII Mass Spectral Data Base. All library matches are manually reviewed by an experienced mass spectroscopist prior to making the final tentative identification.

³ SOW denotes current EPA Contract Laboratory Program (CLP) Statement of Work

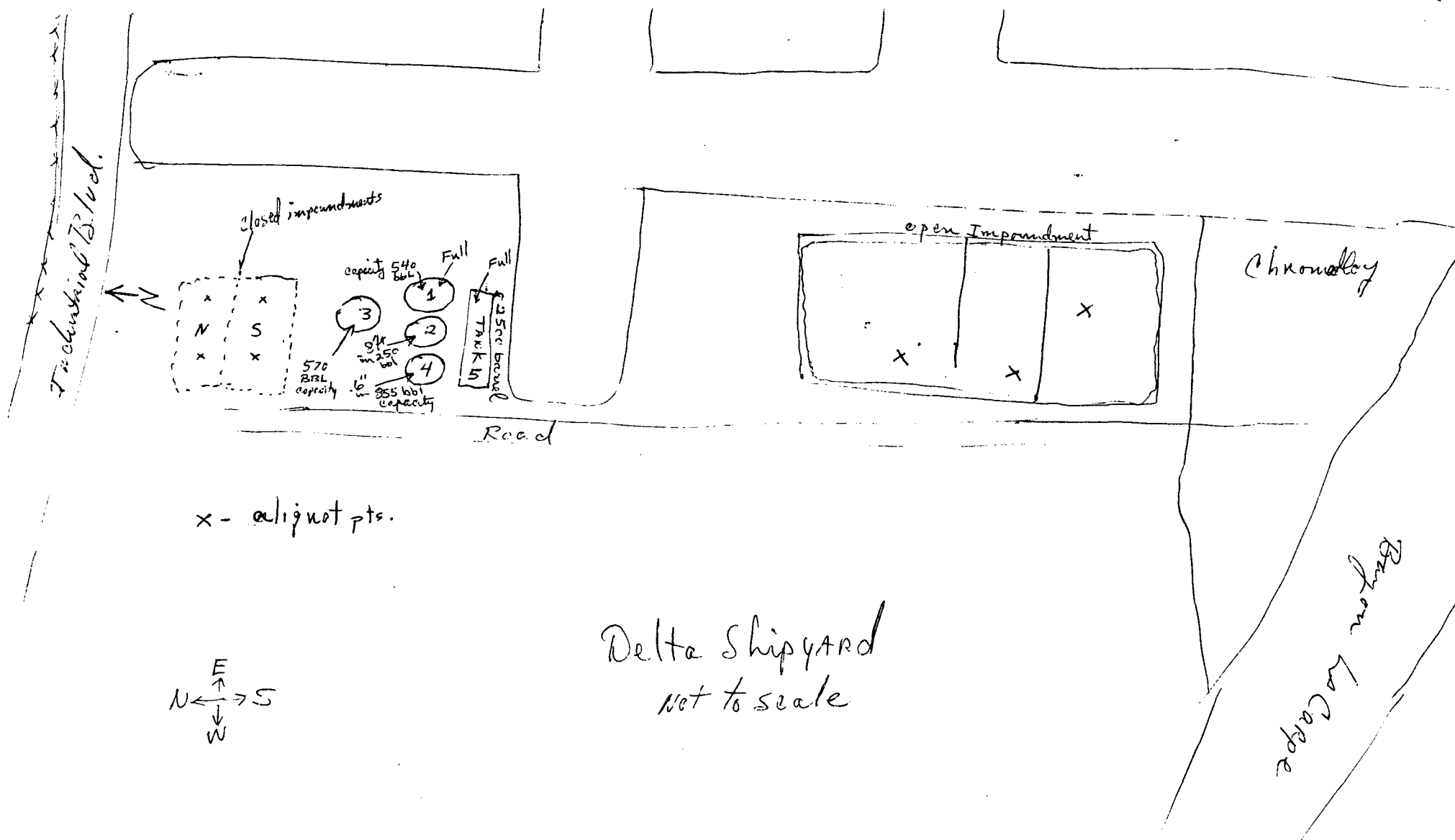
Parameter/Category	Method ¹ (circle one)			01	02	03	04	05	06	07
METALS	ICAP	Flame AA	Flameless AA							
Aluminum	200.7	202.1								
Antimony	200.7	204.1	204.2							
Arsenic	200.7		206.2							
Barium	200.7	208.1								
Beryllium	200.7	210.1								
Boron	200.7									
Cadmium	200.7	213.1	213.2							
Calcium	200.7	215.1								
Chromium	200.7	218.1	218.2							
Chromium VI		218.4								
Cobalt	200.7	219.1								
Copper	200.7	220.1								
Iron	200.7	236.1								
Lead	200.7	239.1	239.2							
Magnesium	200.7	242.1								
Mercury	200.7	243.1	245.1							
Molybdenum	200.7									
Nickel	200.7	249.1								
Potassium	200.7	258.1								
Selenium	200.7		270.2							
Silica	200.7									
Silver	200.7	272.1								
Sodium	200.7	273.1								
Thallium	200.7	279.1	279.2							
Tin		282.1	282.2							
Titanium		283.1	232.2							
Vanadium	200.7	286.1								
Zinc	200.7	289.1								
SAMPLE PREPARATION FOR METAL ANALYSIS										
Water Sample Digestion	200	200	200							
Alkaline Digestion		218.4								
Organic Solvent Extraction		200								
Filtration		200								
Fusion										
Solid Sample Digestion										

¹ EPA methods employed unless otherwise specified.



C. Aerial photograph taken from the Northwest at approximately 500 feet, taken on October 6, 1980.

closed
pits





RECEIVED

OCT 31 1985

Dept. of Environmental Quality
Hazardous Waste Division

PATRICIA L. NORTON
SECRETARY

OFFICE OF SOLID AND HAZARDOUS WASTE

October 30, 1985

JOHN KOURY
ASSISTANT SECRETARY

Mr. Conrad Dussel, P.E.
Wink Engineering
7520 Hayne Boulevard
New Orleans, Louisiana 70126-1899

Dear Mr. Dussell:

RE: Delta Shipyard Waste
Houma and Duson, Louisiana
Terrebonne and Lafayette Parishes
General Correspondence File

Receipt is acknowledged of material indicated in a letter to you from Mr. William B. DeVille dated October 4, 1985.

To date, we have received no indication from our Hazardous Waste Division of the status of your facilities.

You may wish to refer to your letter to Mr. Glenn Miller dated July 5, 1985.

If we can be of further assistance, please call this office.

Sincerely,

PAUL MILLER
Assistant Administrator
Solid Waste Division

PM:BE:dt

cc: Mr. William DeVille
Mr. Glenn Miller ✓



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7520 HAYNE BLVD. ■ NEW ORLEANS, LA. 70126-1899 ■ TELEPHONE: 504/246-7924
SEPTEMBER 20, 1985

MR. BILL DEVILLE
ADMINISTRATOR
LOUISIANA STATE DEPARTMENT OF ENVIRONMENTAL QUALITY
INACTIVE & ABANDONED WASTE SITES DIVISION
P.O. BOX 44307
BATON ROUGE, LA 70804

LETTER NO.: WM59-7
RE: DELTA SHIPYARD'S
WASTE SITES AT
HOUMA & DUSON, LA
JOB: 59-051484

DEAR MR. DEVILLE:

PLEASE FIND ATTACHED A COPY OF THE PACKAGE REPORTING AN INDEPENDENT
LABORATORY ANALYSIS AND OUR OPINION AS TO CLASSIFICATION FOR THE ABOVE
REFERENCED WASTE SITES. I HAVE BEEN INFORMED THAT YOUR OFFICE WILL REVIEW
THE PACKAGE AND STIPULATE THE REQUIREMENTS FOR PROPER DISPOSITION AND
CLASSIFICATION.

PLEASE ADVISE AS TO YOUR DECISION AT THE EARLIEST POSSIBLE DATE.

VERY TRULY YOURS,

CONRAD A. DUSSEL, P.E.
PROJECT ENGINEER

CAD:MLV
CC: H. SEIFE (MILBANK, ET AL)
J. WINK
R. FEEMSTER
ATTACHMENT

RECEIVED

SEP 20 1985

LA. DEPT. OF
ENVIRONMENTAL QUALITY
IAS DIVISION

P.F.H



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7520 HAYNE BLVD. ■ NEW ORLEANS, LA. 70126-1899 ■ TELEPHONE: 504/246-7924

SEPTEMBER 6, 1985

MR. BILL DEVILLE
ADMINISTRATOR
LOUISIANA STATE DEPARTMENT OF
ENVIRONMENTAL QUALITY
INACTIVE & ABANDONED WASTE SITES DIVISION
P.O. BOX 44307
BATON ROUGE, LA 70804

RECEIVED

SEP 10 1985

DEPARTMENT OF
ENVIRONMENTAL QUALITY
HAZARDOUS WASTE MANAGEMENT

LETTER NO.: WM59-6
RE: DELTA SHIPYARDS'
WASTE SITES @
HOUMA & DUSON, LA
JOB: 59-051484

DEAR MR. DEVILLE:

IN REFERENCE TO OUR LETTER NO. WM59-5 DATED JULY 5, 1985, A COPY OF WHICH WAS FORWARDED TO YOUR OFFICE BY THE HAZARDOUS WASTE DIVISION CONCERNING THE ABOVE REFERENCED SUBJECT MATTER, WE WOULD LIKE TO CORRECT A POSSIBLE POINT OF MISINTERPRETATION CONCERNING DUSON #1A WASTE SITE, A SUBMERGED TANK FILLED WITH A LIQUID SUBSTANCE.

THIS PARTICULAR LIQUID SAMPLE WAS INADVERTENTLY LISTED WITH THE COMPOSITE SOLID TEST SAMPLE OF DUSON #1. THIS SHOULD BE CORRECTED TO REFLECT ONLY SOLID COMPOSITES OF DUSON #1B. DUSON #1A LIQUID SAMPLE ANALYSIS IS ATTACHED FOR YOUR REVIEW.

IT IS OUR OPINION THAT THIS MATERIAL IS NOT HAZARDOUS AND WILL NOT POSE A THREAT NOW OR IN THE FUTURE TO HUMAN HEALTH OR THE ENVIRONMENT.

PLEASE ADVISE AS SOON AS POSSIBLE THE PROPER CLASSIFICATION AND DISPOSITION OF THESE WASTE SITES.

VERY TRULY YOURS,

Conrad A. Dussel

CONRAD A. DUSSEL, P.E.
PROJECT ENGINEER

RECEIVED

SEP 13 1985

LA. DEPT. OF
ENVIRONMENTAL QUALITY
IAS DIVISION

CAD:MLV
ATTACHMENT
CC: GLENN MILLER (DEQ, BOX 44066)
DUDLEY DEVILLE (DEQ, BOX 44066)
HOWARD SEIFE (MILBANK, ET AL)

B,F

ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.
2445 Florida Ave., Kenner, Louisiana 70062
(504) 469-0333

LABORATORY REPORT

CLIENT: Wink Engineering

Sample Location: Delta Fabricators
Duson, Louisiana #1 A (Liquid)

Sample Description: 1 Water Sample

Laboratory Number: 850871

Sampling Date: Unknown

Time Sampled: Unknown

Date Received: 08/26/85

Time Received: 0933 Hrs.

Date Analyzed: 09/03/85

Time Analyzed: 1115 Hrs.

Date Completed: 09/05/85

Time Completed: 1300 Hrs.

Analyses Requested: Reactivity, Corrosivity, Ignitability, & EP Toxicity (metals)

Method of Analyses:

Reactivity: Test Method for Evaluation Solid Waste Physical/Chemical Methods
Waste Characterization Branch, EPA, May, 1980.

Corrosivity: Test Method for Evaluation Solid Waste Physical/Chemical Methods
Waste Characterization Branch, EPA, May, 1980.

Ignitability: Method - ANSI/ASTM D 93-79, "Standard Method for Flash and Fire
Standards, 1978.

Extraction Procedures: Federal Register, Vol. 45, No. 98, page 33127.

Arsenic	Method 303E, Page 160
Barium	Method 303C, Page 157
Cadmium	Method 418C, Page 370
Chromium	Method 303A, Page 152
Lead	Method 303A, Page 152
Mercury	Method 320, Page 217
Selenium	Method 303E, Page 160
Silver	Method 303A, Page 152

Analytical methods according to Standard Methods for the Examination of Water and Wastewater. American Public Health Association, 15th Edition, 1980.

Analyzed by: Thomas E. Orl

Date: 9/6/85

Approved by: Thomas E. Orl

Date: 9/6/85

Thomas E. Orl - Manager



ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

RESULTS

#1 A-0.0'

Reactivity:

Cyanide

0.7 (mg/l)

Sulfide

25.6 (mg/l)

Corrosivity

pH

7.9 (S.U.)

Ignitability

Flash Point

>100°C

EP Toxicity

#1
A-0.0'

Max Concen.
for EP
Toxicity

Detection
Limit

Arsenic (mg/l)	0.005	5.0	0.002
Barium (mg/l)	0.17	100.0	0.1
Cadmium (mg/l)	0.060	1.0	0.005
Chromium (mg/l)	0.06	5.0	0.05
Lead (mg/l)	0.50	5.0	0.1
Mercury (mg/l)	0.005	0.2	0.001
Selenium (mg/l)	0.022	1.0	0.002
Silver (mg/l)	0.07	5.0	0.01





COPY

Joan Kelly
Dudley
Jon

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JULY 5, 1985

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AUG 19 1985

DEPARTMENT OF
ENVIRONMENTAL QUALITY
HAZARDOUS WASTE MANAGEMENT

MR. GLENN A. MILLER
ADMINISTRATOR
LOUISIANA DEPARTMENT OF
ENVIRONMENTAL QUALITY
P.O. BOX 44066
BATON ROUGE, LA 70804

LETTER NO.: WM59-5
RE: DELTA SHIPYARD'S
WASTE SITES AT
HOUMA & DUSON,
LOUISIANA
WINK JOB NO.: 59-051485

DEAR MR. MILLER:

THIS LETTER AND ITS ATTACHMENTS ARE PREPARED PURSUANT TO MY TELEPHONE CONVERSATIONS ON JUNE 5, 1985, WITH MESSRS. DUDLEY DEVILLE AND TOM PATTERSON OF YOUR OFFICE. WINK, INC., AN INDEPENDENT CONSULTING ENGINEERING FIRM, HAS BEEN RETAINED TO DETERMINE IF THE ABOVE REFERENCED SITES ARE HAZARDOUS.

THERE ARE CURRENTLY SIX (6) SURFACE IMPOUNDMENTS AT DELTA'S HOUMA YARD: THREE (3) ARE COVERED AND OVERGROWN WITH VEGETATION, WHILE THE REMAINING THREE (3) ARE EXPOSED AND FILLED WITH SLUDGE. AT THE DUSON YARD THERE IS A SUBMERGED, UNCOVERED STEEL TANK FILLED WITH A LIQUID SUBSTANCE. ACCORDING TO OUR RESEARCH, ALL SITES WERE ONCE USED TO DISPOSE OF OIL FIELD DRILLING MATERIAL. THIS PRACTICE CEASED ABOUT 10 YEARS AGO; HOWEVER, IT APPEARS FROM OUR ANALYSIS DUMPING HAS OCCURRED INTERMITTENTLY SINCE THEN. SEVERAL SURFACE SPILLS WERE OBSERVED ON THESE PROPERTIES AND A CHEMICAL ANALYSIS WAS SUBSEQUENTLY MADE.

*Have Richard -
Call C.A. Dussel.*

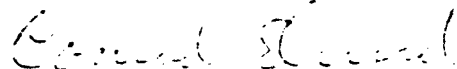
AT ONE TIME THE SURFACE IMPOUNDMENTS AT HOUMA WERE REGISTERED WITH THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS HAZARDOUS WASTE SITES, BUT WERE RECOMMENDED BY YOUR ENFORCEMENT AGENCY IN JANUARY, 1984, TO BE REMOVED FROM THE HAZARDOUS WASTE SYSTEM. CURRENTLY, THESE IMPOUNDMENTS ARE IN THE INACTIVE CLASSIFICATION AS CONFIRMED BY TELEPHONE ON JUNE 5, 1985. TO DETERMINE THE SLUDGE AND LIQUID CHEMICAL COMPOSITION AND THEREFORE THE POTENTIALLY HAZARDOUS NATURE OF THESE SITES, NUMEROUS SAMPLES WERE COLLECTED AT RANDOM LOCATIONS AS INDICATED IN ATTACHMENTS 1, 2, 3, 4, & 5. IMPOUNDMENTS 1, 2, 3 IN HOUMA ARE COVERED WITH A THIN CRUST OF FILL WHILE NOS. 5, 6, 7 ARE EXPOSED. HOUMA AREA NO. 4 AND DUSON AREA NOS. 2 & 3 ARE ESSENTIALLY LOW SPOTS WHERE ACCUMULATIONS OF SLUDGE HAVE SETTLED. DUSON AREA NO. 1 CONSISTS OF A SUBMERGED STEEL TANK OF UNKNOWN DEPTH CONTAINING A LIQUID SUBSTANCE. SOIL SAMPLES WERE TAKEN AT VARIOUS DEPTHS APPROXIMATELY 8" FROM THE SUBMERGED TANK TO CHECK FOR LEAKAGE.

ALL INDIVIDUAL SAMPLES FROM EACH IMPOUNDMENT/AREA WERE THOROUGHLY MIXED TO FORM A COMPOSITE SAMPLE FOR EACH LOCATION. LABORATORY ANALYSES WERE PERFORMED BY WEST-PAINE OF BATON ROUGE, AND THE RESULTS ARE CONTAINED IN ATTACHMENT NO. 6.

THE FOLLOWING TESTS WERE PERFORMED ON EACH SAMPLE: VOA (VOLATILE ORGANIC AROMATICS), CYANIDE, PHENOL (TOTAL), FLASH POINT (BELOW 140°F), PH, EP TOXICITY, AND OIL & GREASE. BASED ON THE ATTACHED ANALYSES, THE EP TOXICITY CONSTITUENTS DO NOT EXCEED THOSE LIMITS DESCRIBED IN CHAPTER 24, TABLE 5. NEITHER DO THE SUMMATION OF CONSTITUENTS LISTED IN PARAGRAPHS 24.1 (D) AND (E) AND CHAPTER 17 EXCEED 1000 PPM. IT IS OUR OPINION THAT THESE SITES ARE NOT TO BE CONSIDERED HAZARDOUS AND WILL NOT NOW OR IN THE FUTURE POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT.

IF YOUR OFFICE IS IN AGREEMENT THAT THESE FACILITIES ARE NOT HAZARDOUS, PLEASE FURNISH THE NECESSARY DOCUMENTS TO AUTHORIZE DECLASSIFICATION OR CONFIRM THAT YOU HAVE CLOSED OUT YOUR FILE.

VERY TRULY YOURS,



CONRAD A. DUSSEL, P.E.
PROJECT ENGINEER

CAD:MLV

ATTACHMENTS

CC: DUDLEY DEVILLE (DEQ)
TOM PATTERSON (DEQ)
HOWARD SEIFE (MILBANK, ET.AL.)

WINK ENGINEERING

A Division of Wink, Inc.

7520 Hayne Blvd.

New Orleans, Louisiana 70126-1899

(504) 246-7924

Attachment No 1

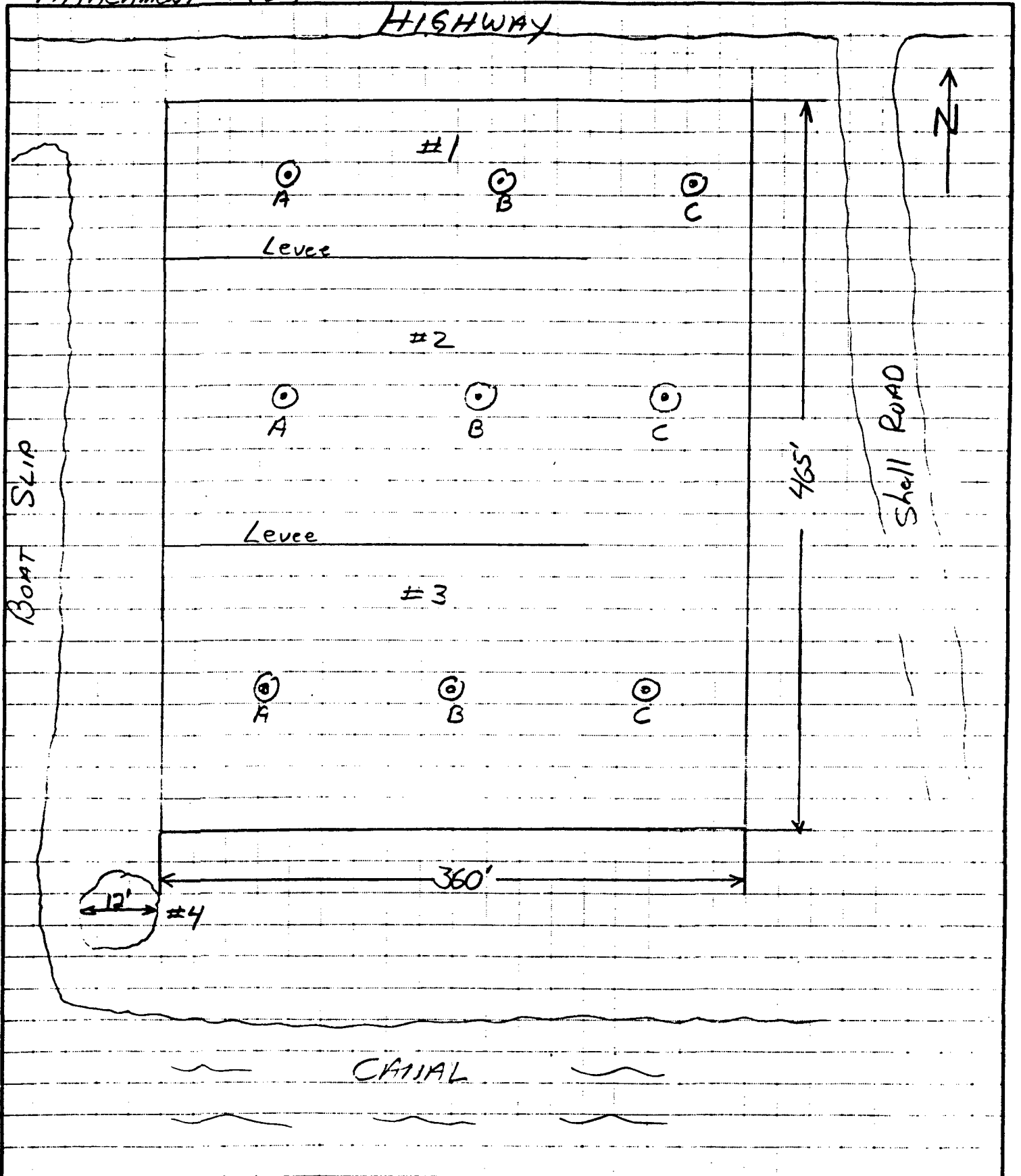
JOB DELTA SHIPYARD-HOUMA, LA

SHEET NO. 1 OF 1

CALCULATED BY CAO DATE 6/18/85

CHECKED BY _____ DATE _____

SCALE 3 COVERED PITS / 1 OPEN SPILL



WINK ENGINEERING

A Division of Wink, Inc.

7520 Hayne Blvd.

New Orleans, Louisiana 70126-1899

(504) 246-7924

JOB DELTA SHIPYARD-HOUMA, LA

SHEET NO. 1 OF 1

CALCULATED BY CAN DATE 6/18/85

CHECKED BY _____ DATE _____

SCALE 3 EXPOSED SURF. IMPOUNDMENTS

ATTACHMENT No. 2

DELTA SHIPYARD

PLANT SHED ROAD

125'

400'

325'

IC #5

AB

ABC

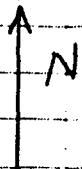
#6

CD

A #7

B

CHROMALLOY



150'

CANAL

WINK ENGINEERING
A Division of Wink, Inc.
7520 Hayne Blvd.
New Orleans, Louisiana 70126-1899
(504) 246-7924

JOB DELTA - LIPYARD - DUSON, LA
SHEET NO. 1 OF 1
CALCULATED BY CAO DATE 6/18/85
CHECKED BY _____ DATE _____
SCALE 1 SUBMERGED TANK + MISC. SPILLS

ATTACHMENT No. 3

VARIOUS Pipe,
Vessels, etc

Ditch → #3

⊙A

#3

⊙B

← SURF. Spill

N ↑

#3

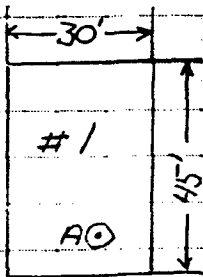
⊙C

#3
⊙D

← SURFACE SPILL

#2

← SURFACE SPILL (10'x15')



Shell Road

I-10 West
get off
Exit next to Helderland
pipe testing.

ATTACHMENT NO. 4
DELTA SHIPYARD SLUDGE SAMPLING PROTOCOL
HOUMA, LA
MAY 20, JUNE 5 & JUNE 6, 1985

<u>SAMPLE NO.</u>	<u>DEPTH</u>	<u>SAMPLE NO.</u>	<u>DEPTH</u>
1A	1'-6"	5A	2'-0"
1A	2'-6"	5A	3'-0"
1A	4'-6"	5A	4'-0"
1A	5'-6"	5A	5'-6"
1B	1'-0"	5B	0'-6"
1B	3'-0"	5B	1'-6"
1B	5'-6"	5B	3'-6"
1C	SURFACE	5B	5'-0"
1C	2'-0"	5C	SURFACE
1C	3'-0"	5C	1'-0"
1C	4'-6"	5C	2'-0"
1C	5'-6"	5C	5'-6"
2A	1'-0"	6A	0'-6"
2A	3'-6"	6A	2'-0"
2A	5'-6"	6A	4'-0"
2B	0'-6"	6B	1'-0"
2B	2'-6"	6B	2'-6"
2B	4'-0"	6B	3'-6"
2C	1'-0"	6B	5'-6"
2C	3'-0"	6C	1'-0"
2C	5'-6"	6C	2'-0"
3A	0'-6"	6C	3'-0"
3A	1'-6"	6C	4'-0"
3A	3'-6"	6C	5'-0"
3A	4'-6"	6D	SURFACE
3B	1'-0"	6D	1'-6"
3B	3'-0"	6D	2'-6"
3C	0'-6"	6D	3'-0"
3C	2'-0"	7A	SURFACE
3C	4'-0"	7A	2'-0"
4	SURFACE SAMPLES	7A	3'-0"
		7B	0'-6"
		7B	2'-6"
		7B	4'-0"

ATTACHMENT NO. 5
DELTA SHIPYARD SLUDGE SAMPLING PROTOCOL
DUSON, LA
JUNE 5, 1985

SAMPLE NO.

DEPTH

1A	SURFACE (LIQUID)
1B	0'-6" (WITHIN 8" OF PIT
1B	1'-0"
1B	3'-6"
1B	5'-0"
2	0'-6"
2	1'-0"
2	3'-0"
3A	SURFACE
3B	SURFACE
3C	SURFACE
3D	SURFACE



7979 GSRI AVE. • BATON ROUGE, LA 70820

SAMPLE ANALYSES

for

WINK ENGINEERING
7520 Hayne Blvd.
New Orleans, Louisiana 70126-1899

ATTENTION: Mr. Conrad A. Dussel

June 11, 1985



7979 GSRI AVE. • BATON ROUGE, LA 70820

WINK ENGINEERING
New Orleans, Louisiana

June 11, 1985

Samples collected by Wink Engineering as documented by the enclosed chain-of-custody form, were received at West-Paine Laboratories, Incorporated on June 5, 1985 and June 7, 1985. The samples were analyzed according to the Environmental Protection Agency protocol:

A. Test Methods for Evaluating Solid Waste, SW-846, July 1982:

<u>Parameter</u>	<u>Method</u>
Cyanide	9010
Ignitability	1010
EP Toxicity Extraction Procedure	1310
Arsenic	7060
Barium	7080
Cadmium	7130
Chromium	7190
Lead	7420
Mercury	7470
Selenium	7740
Silver	7760
Volatile Organic Fraction	8240
pH	9040

B. Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980:

<u>Parameter</u>	<u>Method</u>
Oil & Grease	503C



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WINK ENGINEERING
New Orleans, Louisiana

June 11, 1985

- C. Standard Methods for the Examination of Water and Wastewater, 14th
Edition, 1979:


Parameter

Method

Phenol

510A, 510B

The results are on the following pages.


Victor J. Blanchard, III
Manager



7979 GSRI AVE. • BATON ROUGE, LA 70820

WINK ENGINEERING
New Orleans, Louisiana

June 11, 1985

Sample Identification: DUSON #1 Composite

Date Received: June 5, 1985

<u>Parameter</u>	<u>Results</u>	<u>Quality Assurance Actual/Found</u>	<u>Date/Time Analyst</u>
Phenol (mg/kg Phenol)	0.53	0.020/0.021	06-07/0800/BE
Cyanide (mg/kg CN)	<0.5	0.100/0.110	06-07/0930/MS
pH (Units) as 4% w/v	8.5	7.0/7.0	06-10/1200/RC
Flashpoint (^o F)	>200	Not Applicable	Not Applicable
Oil & Grease (mg/kg)	36,100	10.0/8.4	06-10/1600/RH



7979 GSRI AVE. • BATON ROUGE, LA 70820

WINK ENGINEERING
New Orleans, Louisiana

June 11, 1985

Sample Identification: DUSON #2 Composite

Date Received: June 5, 1985

<u>Parameter</u>	<u>Results</u>	<u>Quality Assurance Actual/Found</u>	<u>Date/Time Analyst</u>
Phenol (mg/kg Phenol)	0.43	0.020/0.021	06-07/0800/BE
Cyanide (mg/kg CN)	<0.5	0.100/0.110	06-07/0930/MS
pH (Units) as 4% w/v	9.2	7.0/7.0	06-10/1200/RC
Flashpoint (^o F)	>200	Not Applicable	Not Applicable
Oil & Grease (mg/kg)	53,000	10.0/8.4	06-10/1600/RH



7979 GSRI AVE. • BATON ROUGE, LA 70820

WINK ENGINEERING
New Orleans, Louisiana

June 11, 1985

Sample Identification: DUSON #3 Composite

Date Received: June 5, 1985

<u>Parameter</u>	<u>Results</u>	<u>Quality Assurance Actual/Found</u>	<u>Date/Time Analyst</u>
Phenol (mg/kg Phenol)	0.15	0.020/0.021	06-07/0800/BE
Cyanide (mg/kg CN)	<0.5	0.100/0.110	06-07/0930/MS
pH (Units) as 4% w/v	9.0	7.0/7.0	06-10/1200/RC
Flashpoint (°F)	>200	Not Applicable	Not Applicable
Oil & Grease (mg/kg)	163,000	10.0/8.4	06-10/1600/RH

SOIL TESTING ENGINEERS, INC.

CONSULTING GEOTECHNICAL ENGINEERS

P. O. BOX 80379 • 316 HIGHLANDIA DRIVE • BATON ROUGE, LOUISIANA 70808 • PHONE (504) 292-4790

DR. P. BOUTWELL, JR. PhD
DR. B. ADAMS, ME
DR. L. BRYANT, ME
DR. M. THORP, MS
REGISTERED PROFESSIONAL ENGINEERS
BROWN, MS

November 26, 1980

T. Baker Smith and Sons, Inc.
Environmental Research Division
P. O. Box 2266
Houma, Louisiana 70361

Attention: Mr. Horace J. Thibodaux, RS
Director of Environmental Research

Re: Preliminary Soil Borings
and Laboratory Testing
Delta Shipyard Disposal Pit
Houma, Louisiana
File: 80-173

Gentlemen:

We have completed the field work and laboratory tests performed on samples obtained from two borings completed during the period November 3 and 4, 1980, at the Delta Shipyard disposal pit. Additionally, two observation wells with caps, were installed close to the borings (see Figure 2). The findings of the borings and the results of the laboratory testing are presented herein. The approximate locations of the borings are shown on the Boring Plan, Figure 1. The soil data on this cross section has been interpolated between the borehole locations and does not define continuity of the strata. For details, refer to the individual logs of the borings. The field and laboratory procedures used in this investigation are discussed below.

It should be noted that a geotechnical/geologic report was not requested at this stage. If such a report is later required, then necessary additional borings and testing, as well as engineering analyses can be performed.

FIELD EXPLORATION

General. The borings were made with tractor-mounted, rotary-type drilling equipment. Samples were obtained continuously in the upper 20 feet, below the 20 foot level, samples were generally obtained on 3 to 5 foot centers. The total exploration program consisted of 100 lineal feet of borings, 40 feet of which were sampled continuously. Logs of the borings are attached. The boreholes were grouted with a bentonite/cement grout. Two observation wells were installed as indicated on the Monitoring Well logs (W-1 and W-2) and Figure 1.

CONSULTATION - EXPLORATION - TESTING - INSPECTION

LAKE CHARLES OFFICE 4001 LEBLANC STREET LAKE CHARLES, LOUISIANA 70601 • PHONE (318) 431-6912

Sampling Procedures. In the cohesive and semi-cohesive soils, relatively undisturbed samples were secured using a 3 inch diameter, thin-wall Shelby Tube sampler. In this sampling procedure, the borehole is advanced to the desired level, and the tube is lowered to the bottom of the boring. It is then forced about 2 feet into the undisturbed soil in one continuous stroke. The tube is retrieved and the sample extruded by a hydraulic piston. The sample is then visually classified and a penetrometer relative strength test performed. Any disturbed portions are discarded, and the sample protected for transportation to the laboratory.

LABORATORY PROCEDURES

Some samples from the various strata were tested in the laboratory to determine their classifications and permeability characteristics. The samples and types of tests performed were selected by a geotechnical engineer. The testing program conducted is described below.

Classification Tests. Thirteen (13) Atterberg Limit Determinations, and one Separate Moisture Content Determination were conducted to classify the soil types.

Consolidation/Permeability Tests. Two (2) Standard Consolidation tests were performed. These were used in determining the Coefficient of Permeability of fine grained soils. The results are given below.

Boring No.	Depth (feet)	Perm. Coef. (cm/sec.)	Soil Description
B-1	6-8	4.3×10^{-8}	Gray organic clay
B-2	12-14	1.2×10^{-7}	Dark gray organic clay (peat)

Chemical Tests. Fourteen (14) pH determinations were performed to determine soil acidity/alkalinity. The results are give on Table I.

The results of the consolidation test are presented on Figure A-I through A-II; the remainder of the testing program is summarized in the appropriate columns of the boring logs.

We will be happy to answer any questions which may arise concerning this information. It has been a pleasure to work with Mr. Thibodaux on this project, and we look forward to serving T. Baker Smith and Sons again in the future.

Sincerely,

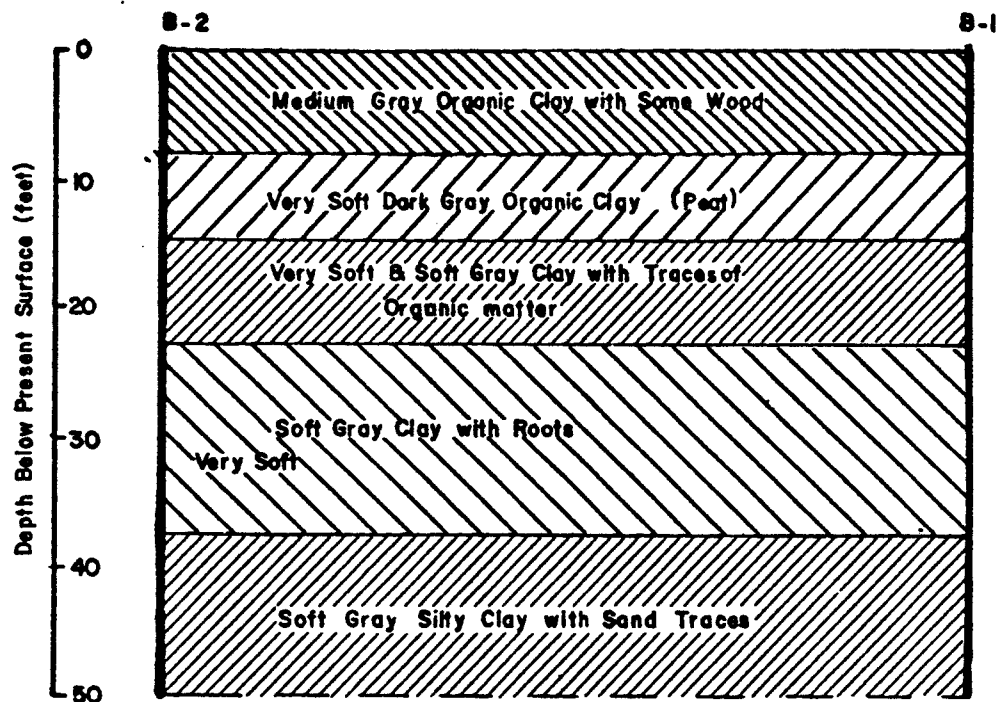
Narendra M. Dave
Narendra M. Dave
Project Engineer

Richard B. Adams
Richard B. Adams, P.E.

/llt

Enclosures

Copies submitted: (4)

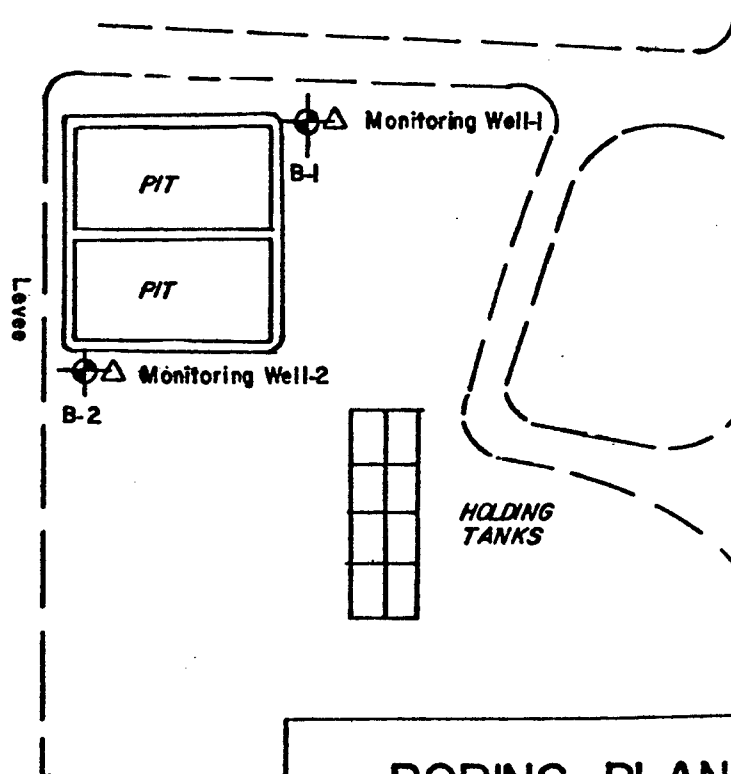


SOIL PROFILE

No Horiz. Scale

NOTE:

Strata interpolated between
not define continuity between



BORING PLAN

No Scale

Project Delta Disposal Pit
Houma, Louisiana

SOIL BORING LOG

Boring No. B-1

File No. 80-173

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Sheet 1 of 2


Date 11/03/80

Tech. Chenevert

FIELD DATA		LABORATORY DATA					Boring Advance Method:
Depth (feet)	Standard Penetration Test (blows/foot) or Penetrometer(P) (tons/sq.ft)	Compressive Strength (tons/sq.ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Liquid Limit (%)	Plasticity Index (%)	Wash 0' to 50'
1.2 (P)							Medium gray organic clay, w/wood
0.8 (P)			52		102	74	
5 0.7 (P)							
0.5 (P)			78		140	93	
10 N.P.							Very soft dark gray organic clay(peat)
0.1 (P)			140		218	135	
0.1 (P)							
15 0.5 (P)							Very soft gray clay, w/traces of organic matter
0.2 (P)			37		66	37	
20 0.7 (P)							
25 0.6 (P)							Soft gray clay, w/roots --very soft
30 0.1 (P)			50		77	42	
35 0.0 (P)							
40 1.1 (P)			31				Medium gray silty clay, w/sand traces

SYMBOL

 Standard Penetration Test
140 lb. hammer-30" fall

 Undisturbed Sample
3 in. dia. Shelby Tube

 No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise



Project Delta Disposal Pit
Houma, Louisiana

JIL BORING LOG

Boring No. B-1

File No. 80-173

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Sheet 2 of 2

Date 11/03/80

Tech. Chenevert

FIELD DATA			LABORATORY DATA					
Depth (feet)	Standard Penetration Test (blows/foot) or Penetrometer (P) (tons/sq. ft)	Compressive Strength (tons/sq. ft.)	Moisture Content (%)	Dry Density (lbs./cu. ft.)	Liquid Limit (%)	Plasticity Index (%)		
45	0.6 (P)						Soft gray silty clay, w/sand traces	
50	0.5 (P)		38		38	14		
							Boring terminated @ 50'	

100L

Standard Penetration Test
600 lb. hammer - 30" fall

Undisturbed Sample
3 in. dia. Shelby Tube

No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise
Grain Boundaries May Not Be Exact



SOIL TESTING ENGINEERS, INC.

Project Delta Disposal Pit
Houma, Louisiana

OIL BORING LOG

Boring No. B-2

File No. 80-173

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Sheet 1 of 2

Date 11/04/80

Tech. A. Kahn

FIELD DATA		LABORATORY DATA					Boring Advance Method: Auger 0' to 2' Wash 2' to 50'
Depth (feet)	Standard Penetration Test (blows/foot) or Penetrometer (P) (tons/sq. ft.)	Compressive Strength (tons/sq. ft.)	Moisture Content (%)	Dry Density (lb./cu. ft.)	Liquid Limit (%)	Plasticity Index (%)	
1.2 (P)		41			107	68	Medium gray organic clay, w/some wood
0.7 (P)		54			101	54	
0.6 (P)							
N.P.							
0.3 (P)		131			154	107	Very soft dark gray organic clay (peat)
0.3 (P)							
0.4 (P)		110			284	162	
0.5 (P)							Soft gray clay, w/traces of organic matter
0.2 (P)							
1.2 (P)		39			88	60	
0.5 (P)							Soft gray clay, w/wood & roots
0.4 (P)							
0.1 (P)		35			63	38	
0.3 (P)							Soft gray silty clay, w/sand traces

Standard Penetration Test
140 lb. Hammer - 30" fall

Free Water First Encountered

Undisturbed Sample
3 in. dia. Shelby Tube

Water Level After 10 minutes
(Prior to Wash Boring)

No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise
Soil Boundaries May Not Be Exact



Project Delta Disposal Pit
Houma, Louisiana

SOIL BORING LOG

Boring No. B-2

File No. 80-173

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Sheet 2 of 2

Date 11/04/80

Tech. Chenevert

FIELD DATA			LABORATORY DATA					
Depth (feet)	Standard Penetration Test (blows/foot) or Penetrometer (P) (tons/sq. ft)	Compressive Strength (tons/sq. ft.)	Moisture Content (%)	Dry Density (lbs./cu. ft.)	Liquid Limit (%)	Plasticity Index (%)		
45	0.3 (P)		32		35	9	Soft gray silty clay, w/sand traces	
50	0.7 (P)							
							Boring terminated @ 50'	

Standard Penetration Test
140 lb. hammer-30" fall

Undisturbed Sample
3 in. dia. Shelby Tube

No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise
Strata Boundaries May Not Be Exact



SOIL TESTING ENGINEERS, INC.

MONITORING WELL LOG

Boring No. W-1

Project Delta Disposal Pit
Houma, Louisiana

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

File No. 80-173

Date 11/03/80

By Chenevert

FIELD DATA

Boring Advance Method:

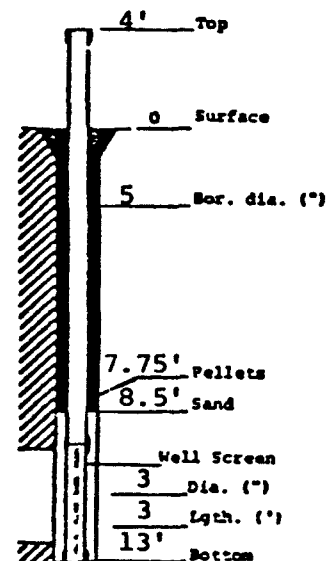
Wash 0' to 12'

Drill Rig: 200

Driller: James Kelly

Monitoring Well Data

Well No. 1



SEE BORING B-1

Boring terminated @ 12'

☒ Standard Penetration Test
40 lb Hammer - 30 in fall

☒ Undisturbed Sample
3 in dia Shelby Tube

☒ No Recovery

Soil boundaries inferred and may not be exact

SOIL TESTING ENGINEERS, INC.

Boring No. W-2

By Chenevert

20'

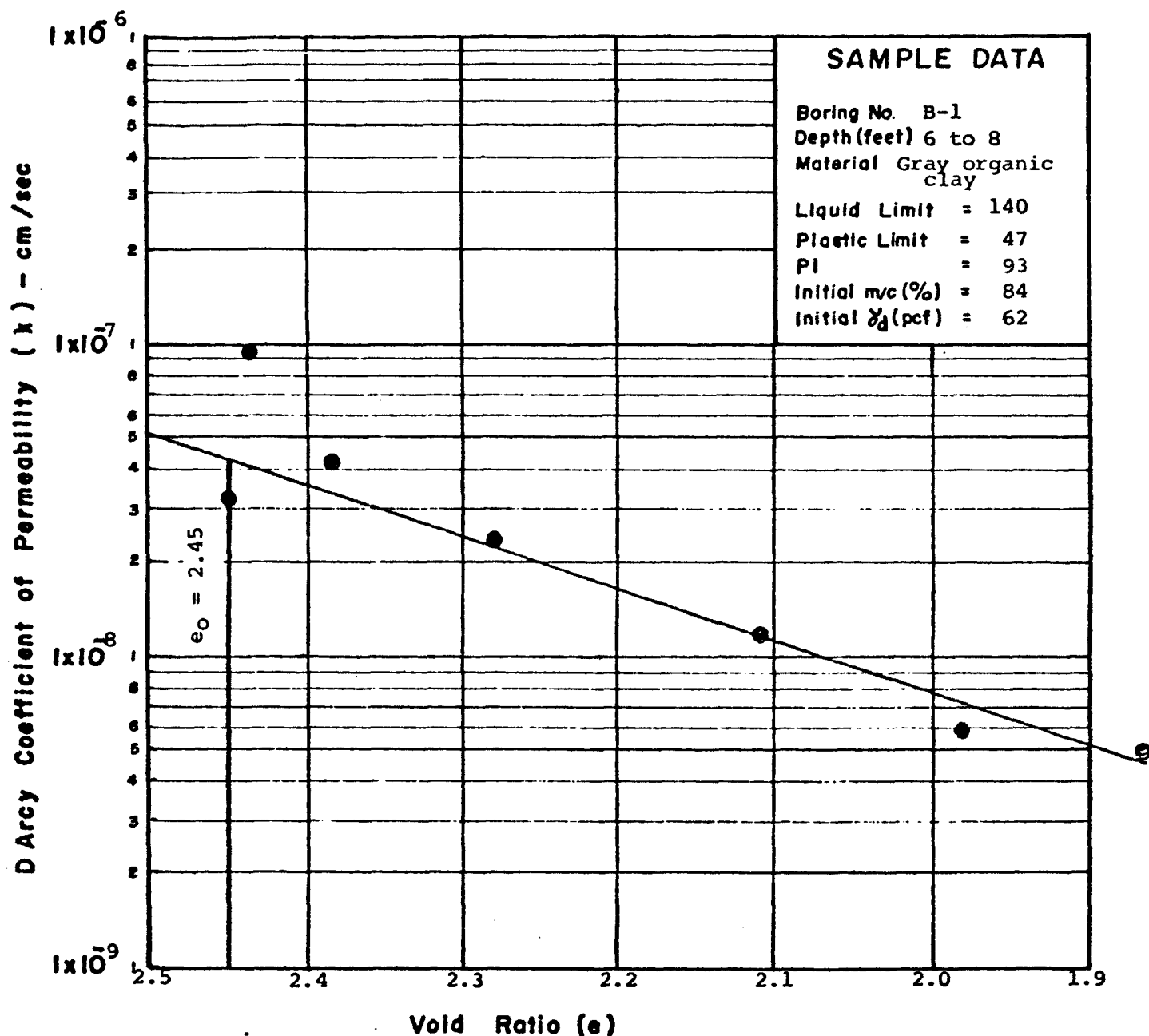
- Street boundaries inferred and may not be exact



SOIL TESTING ENGINEERS, INC.

TABLE I
CHEMICAL ANALYSIS

<u>Boring No.</u>	<u>Depth (feet)</u>	<u>pH</u>
1	2.0 to 4	7.3
1	6.0 to 8	7.9
1	10.0 to 12	5.9
1	16.0 to 18	7.3
1	28.0 to 30	8.2
1	38.0 to 40	8.1
2	0 to 2	6.8
2	4.0 to 6	7.7
2	8.0 to 10	7.5
2	12.0 to 14	6.3
2	18.0 to 20	8.0
2	33.0 to 35	8.0
2	43.0 to 45	8.0



● Raw Data Point

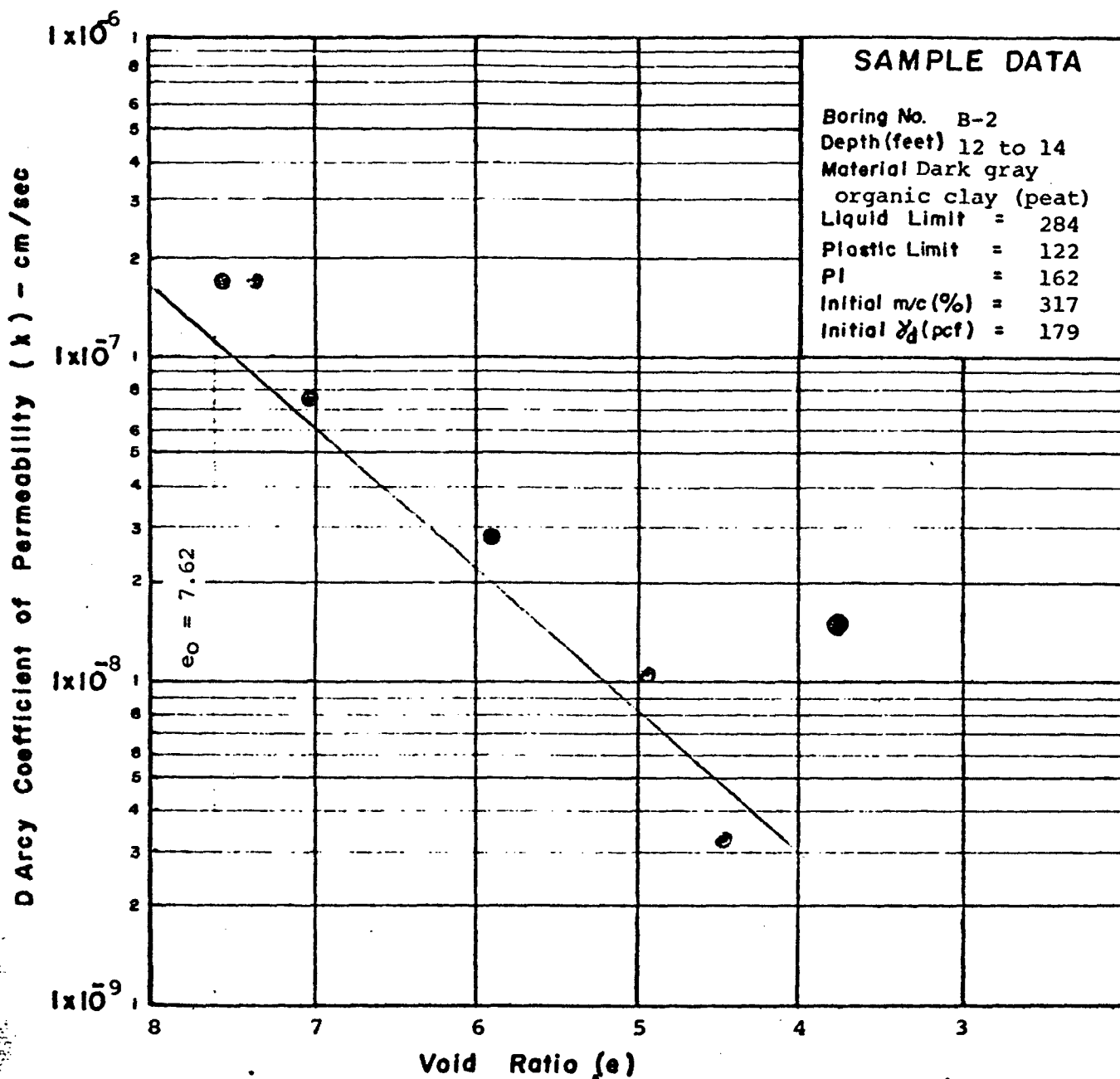
— Best Fit Linear Regression
in Stable Range

$$k = C_v \gamma_w \frac{\Delta e / \Delta \sigma}{1 + e_0}$$

C_v = Coeff. of Consolidation
 Δe = Change in Void Ratio
 $\Delta \sigma$ = Change in Pressure
 γ_w = Unit Weight of Water

$$k = 4.3 \times 10^{-8} \text{ cm/sec at } e_0 = 2.45$$

PERMEABILITY DETERMINED BY CONSOLIDATION TEST



● Raw Data Point

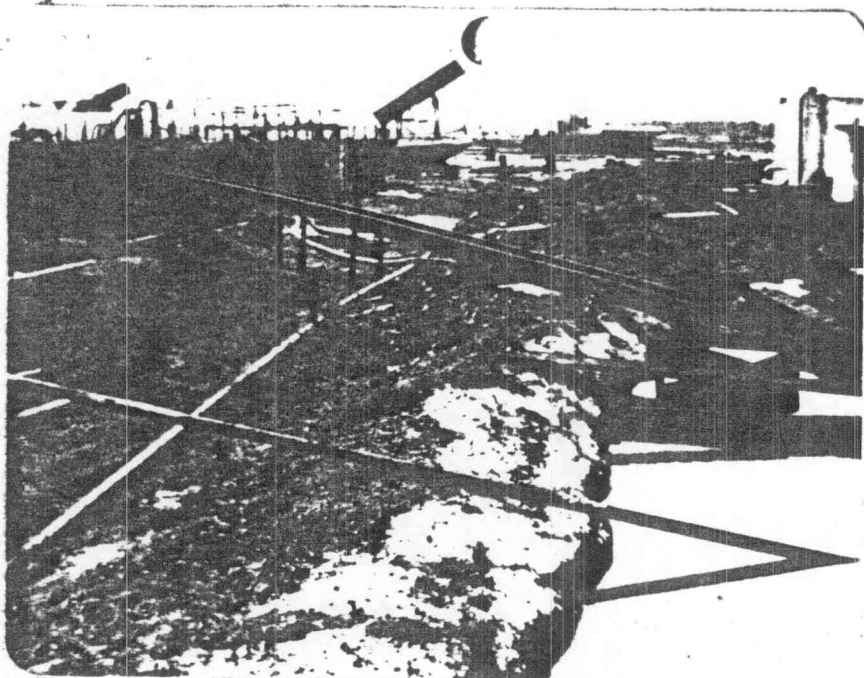
— Best Fit Linear Regression
in Stable Range

$$k = C_v \gamma_w \frac{\Delta e \Delta \sigma}{1 + e_0}$$

C_v = Coeff. of Consolidation
 Δe = Change in Void Ratio
 $\Delta \sigma$ = Change in Pressure
 γ_w = Unit Weight of Water

$$k = 1.2 \times 10^{-7} \text{ cm/sec at } e_0 = 7.62$$

PERMEABILITY DETERMINED BY CONSOLIDATION TEST



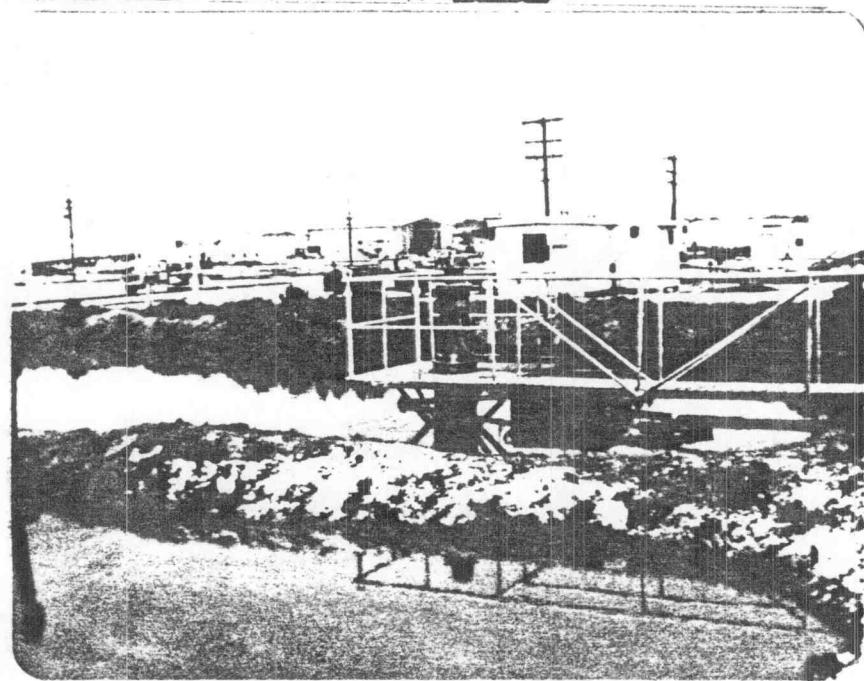
Photographer / Witness PHOTO #1

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:00 / SE

Comments: surface impoundment
in foreground; upper left background
shows separator tank and overflow
trough



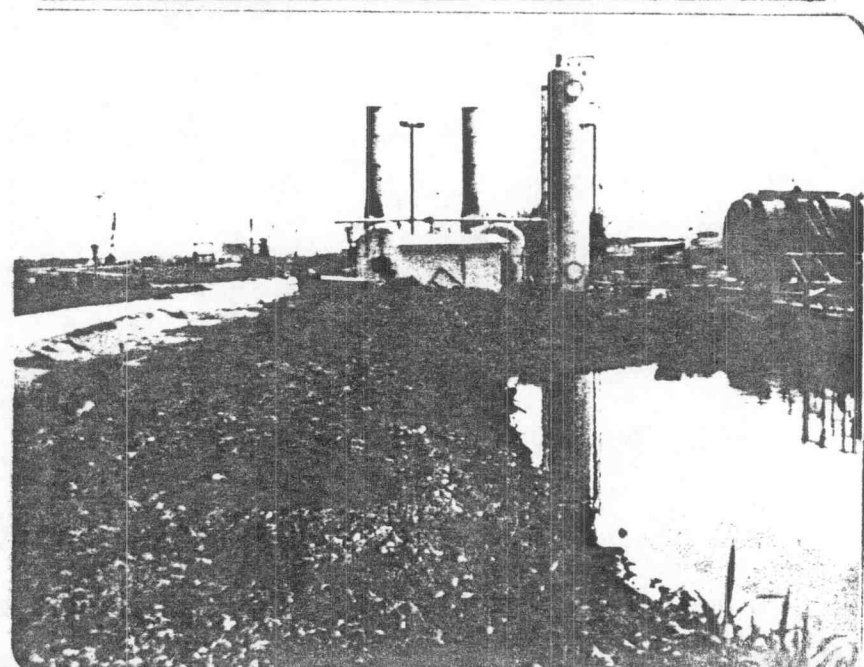
Photographer / Witness PHOTO #2

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:05 / NW

Comments: suction line from
waste water impoundments to
boilers.



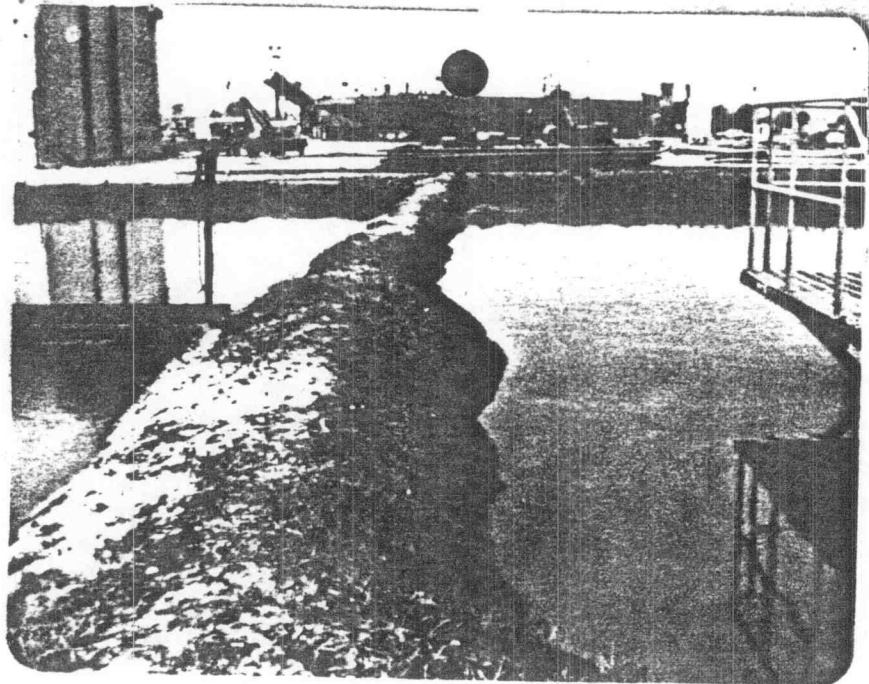
Photographer / Witness PHOTO #3

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:27 / SW East

Comments: looking towards steam
cleaning boilers and northern part
of water impoundments.



Photographer / Witness **PHOTO #4**

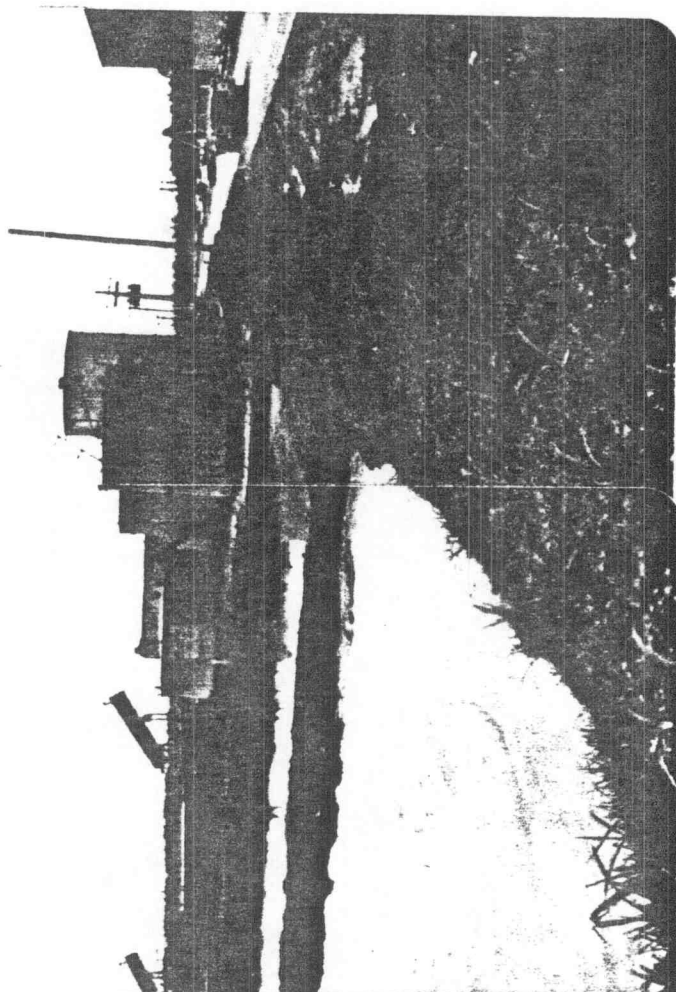
G. Duran / D. Vaughn

Date / Time / Direction

3-11-81 / 11:10 / W

Comments: View of both

pits and levee



Photographer / Witness **PHOTO #1**

G. Duran / D. Vaughn

Date / Time / Direction

3-11-81 / 11:17 / SE to S

Comments: panorama of pits,

including separator, boilers at
extreme left, and storage tank
at right.

Photographer / Witness

Date / Time / Direction

Comments: _____